DOCUMENT RESUME

ED 417 258 UD 032 203

TITLE	Charting the Right Course: A Report on Urban Student Achievement and Course-Taking.
INSTITUTION	American Coll. Testing Program, Iowa City, IA.; Council of the Great City Schools, Washington, DC.
PUB DATE	1998-01-00
NOTE	24p.
PUB TYPE	Reports - Evaluative (142)
EDRS PRICE	EDRS Price MF01 Plus Postage. PC Not Available from EDRS.
DESCRIPTORS	*Academic Achievement; College Entrance Examinations; *Core Curriculum; *Course Selection (Students); Ethnicity; *High School Graduates; High Schools; Minority Groups; School District Wealth; Sex Differences; Urban Schools; *Urban Youth
IDENTIFIERS	*ACT Assessment; Council of Great City Schools

ABSTRACT

This report seeks to answer the question whether improving the course-taking choices of urban school students can close the achievement gap between urban students and students nationally. It examines ACT Assessment scores for June 1997 high school graduates from school districts that are members of the Council of the Great City Schools. The specific focus is the impact of student course preparation, course-taking sequence, school district wealth, student ethnicity, and gender on ACT Assessment Program results of students in America's major urban public school systems. Findings show that urban students who take the core courses recommended by the ACT tend to earn higher scores on the ACT Assessment for college admissions than those who do not take college preparatory courses. The achievement gap between urban students and others can be significantly reduced, but is not eliminated when urban students take the core courses in all subjects. The gap narrows when the ACT scores of students taking rigorous courses are compared with the national average, but the gap widens again when rigorous course takers from urban areas are compared to rigorous course takers nationally. Ten percent of Council member districts (five districts) attained average ACT Assessment composite scores at or above the ACT national average. Students attending wealthier urban districts with relatively small Title I populations attain significantly higher ACT Assessment composite scores than students in districts with larger Title I populations. An appendix lists the member districts of the Council of the Great City Schools and the numbers of ACT Assessment takers in each. (Contains 10 figures and 4 tables.) (SLD)

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ED 417 258

Charting the Right Course

A Report on Urban Student Achievement and Course-Taking

by

ACT, Inc.
and the
Council of the Great City Schools

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January 1998

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Acknowledgments

ACT, Inc. and the Council of the Great City Schools thank the following individuals for their excellent work on this report--

Sharon Lewis, Director of Research, Council of the Great City Schools

Adriane Williams, Research Specialist, Council of the Great City Schools

Cynthia B. Schmeiser, Vice President, ACT, Inc.

Henry Duvall, Director of Communications, Council of the Great City Schools

Robert Ziomek, Director of Program Evaluation, ACT, Inc.

Kelley Hayden, Director of Communications, ACT, Inc.

Nancy Kober, Kober and Associates.

Staff from ACT, Inc. conducted computer runs and statistical analyses of the assessment data. Individual reports for each city included in this report were also prepared by ACT. In addition, ACT provided critical comments during the writing of the report.

Staff from the Council of the Great City Schools took primary responsibility for analyzing findings and writing the report. In addition, the Council assisted ACT in the preparation of data runs, supplying suggestions for data layout and analysis. Finally, the Council was responsible for report layout and graphics.

Kober and Associates provided editing services.

This report is the first ever published to use a single assessment instrument to analyze student achievement results across multiple big city school districts. Other available assessments, like the National Assessment of Education Progress, provide a sample for urban schools, but they do not provide accompanying data on student demographics, course-taking patterns, and other variables, as this report does.

Charting the Right Course was produced with the strongest conceivable collaboration between ACT and the Council. Each of us would like to thank the other for their skilled work in producing it.

Thank you.

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"We can, whenever and wherever we choose, successfully TEACH all children whose schooling is of interest to us. We already know more than we need to do that. Whether or not we do it must finally depend on how we feel about the fact that we haven't so far."

Ronald Edmonds

Foreword

The academic achievement of America's urban school children is one of the most critical challenges facing public education today. Big city public schools, for their part, are tackling their problems by raising standards, improving achievement, strengthening accountability, and closing resource gaps. One of their strategies for improvement also includes improving course-taking patterns among urban high school students. Research has consistently shown that rigorous course-taking choices have a profound effect on later success in school. But until now no one has examined those choices in urban schools or how those choices relate to student income, ethnicity, and gender.

This report, *Charting the Right Course*, written by the Council of the Great City Schools and ACT, Inc., seeks to answer the question, "Can improving the course-taking choices of urban school students close the achievement gaps between urban students and students nationally?" It examines ACT Assessment scores for June, 1997 high school graduates of Council member districts who took the assessments for college admission and placement. Specifically, this report examines the impact of student course preparation, course-taking sequence, school district wealth, student ethnicity, and gender on ACT Assessment Program results of students in the nation's major urban public school systems.

In this report, the Council and ACT, Inc. also explore the implications of the data trends we observed and how they are affected by the larger context in which they occur. One of the report's key findings, for instance, is that urban students who take the courses necessary for college admission outperform their counterparts who do not. But the report also concludes that substantial gaps remain, including some that urban school policy makers can do something about—such as increasing standards and providing better professional development--and some that must be addressed by others outside the schools--such as reducing resource disparities. The report looks at both.

We conclude the report by describing promising practices from urban districts that are successfully preparing students for college and by making recommendations on how to close the achievement gaps.

The Council and ACT, Inc. are encouraged by the preliminary results shown in this report, and will be conducting further analyses on the data. We hope that this first report will help policy makers in urban school systems make better, more informed decisions about their programs and efforts to enhance learning. We also hope that this report will clarify what sound course-taking decisions by students can accomplish and what they cannot.

Richard Ferguson
President
ACT, Inc.

Michael Casserly
Executive Director
Council of the Great City Schools

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Summary of Findings

It is important for every urban student who is considering attending college to take a college preparatory core program of high school courses, including 4 years of English, 3 or more years of mathematics beginning with Algebra I, 3 or more years of social studies, and 3 or more years of science. It is not only important that students take the **right number** of courses, it is equally important for them to take the **right courses** to prepare for college and work and to preclude the need for remedial coursework after high school. Following are key findings from this study:

1. Urban students who take the core courses tend to earn, on average, higher scores on the ACT Assessment for college admissions than those who do not and are consequently better prepared to take on college coursework.

2. The achievement gap between urban and non-urban students can be significantly reduced, but is not eliminated when urban students take the core courses in all subjects.

3. When comparing ACT scores of urban students taking rigorous courses with the national average (unadjusted for course sequence), the achievement gap closes significantly. However, the gap widens again when rigorous course takers from urban areas are compared to rigorous course takers nationally.

4. Urban students taking five years of mathematics -- Algebra 1, Algebra 2, Geometry, Trigonometry, and Calculus (not Pre-Calculus)-- attain higher ACT Mathematics Test scores than those who take fewer mathematics courses.

5. Urban students who complete the core sequence in science, beginning with Biology, have higher ACT Science Reasoning Test scores, on average, than students who complete the science sequence beginning with a general science course.

6. Students attending wealthier urban school districts with relatively small Title I populations attain significantly higher ACT Assessment composite scores than students in districts with larger Title I populations.

7. Ten percent of Council member districts (5 districts) attained average ACT Assessment composite scores at or above the ACT national average (21.0).

8. Urban females outperformed males on the ACT English and Reading Tests; urban males outperformed females on the Mathematics and Science Reasoning Tests.

9. Significantly more urban students, than students nationally, indicated that they would like help with 1) expressing their ideas in writing, 2) improving reading speed and comprehension, 3) improving math skills, 4) improving study skills, and 5) personal concerns.

10. Students enrolled in the poorest urban public schools who took the most rigorous courses outscored the average urban student regardless of poverty.

Charting the Right Course:
A Report on Urban Student Achievement and Course-Taking

Introduction

The U.S. Department of Education released an important study in October 1997 that showed that students who take Algebra, Geometry, and other rigorous mathematics courses are more likely to go on to college. This finding prevailed, according to the Department, regardless of family income.

That report, *Mathematics Equals Opportunity*, was significant because it drew a straight line between student access to college, and student choices and school offerings of mathematics and science courses. It pointed to the importance of students' taking Algebra as early as the 8th grade and tackling chemistry in high school. And it helped clarify that student performance depended less on attending a public or private school than it did on taking the right courses. Finally, the report made critical the point that low-income students who took Algebra I and Geometry were three times as likely to attend college as those who did not.

This study, *Charting the Right Course*, conducted by ACT, Inc. and the Council of the Great City Schools (CGCS), expands on the Department of Education's work by looking at the academic success of students from urban public schools exclusively. Unlike the Education Department's report, this report examines the effects of specific course sequences, school system size, student ethnicity and gender, and poverty levels on college admission test scores. This study also attempts to estimate how improving course-taking patterns alone can help to narrow the achievement gap between urban school student performance and national average scores on the ACT Assessment.

Data Collection and Analysis

Staff from ACT Inc. and the Council of the Great City Schools (CGCS) began discussing possibilities for joint research efforts in 1996. The result of these conversations was an agreement between the Council and ACT, Inc. to analyze college admission test scores for students in America's major urban public school systems. ACT, Inc. was able to use results from its ACT Assessment Program for the Spring 1997 high school graduating class. ACT Assessment composite and content area scores were collected and disaggregated for students in Great City School districts according to the following variables:

- academic preparation – core courses or more
- academic preparation – course sequence
- student gender
- student ethnicity
- concentration of poverty
- school district size

Adequate high school course preparation or "core courses" are defined as the courses in each content area that many college admissions officers use to determine proper academic preparation for an incoming college freshman. Those courses include—

English (four years or more):
One year credit each for English 9, English 10, English 11, and English 12.

Mathematics (three years or more):
One year credit each for Algebra 1, Algebra 2, and Geometry. One-half year credit each for Trigonometry, Calculus (not Pre-Calculus), other Mathematics courses beyond Algebra 2, and Computer Mathematics/ Computer Science.

Social Studies (three years or more):
One year credit each for American History, World History, and American Government; one-half year credit each for Economics, Geography, Psychology, and other history (European, State, etc.).

Science Reasoning (three years or more)
One year credit each for General/Physical/Earth Science, Biology, Chemistry, and Physics.

A "less than core" academic program is defined as any high school program consisting of fewer courses than those included in the core curriculum included here.

ACT, Inc., in collaboration with Council research staff, analyzed the data on all variables for 49 Council member school districts. All data were compared and contrasted with national averages to ensure the greatest level of comparability. The reader should note, however, that the proportion of students taking the ACT Assessment varies widely from city to city. In some districts, the SAT is the college admissions examination taken by the majority of graduating seniors, the number of which were not collected for this report. A list of districts on which analysis is based and the number of test takers by district can be found in the Appendix.

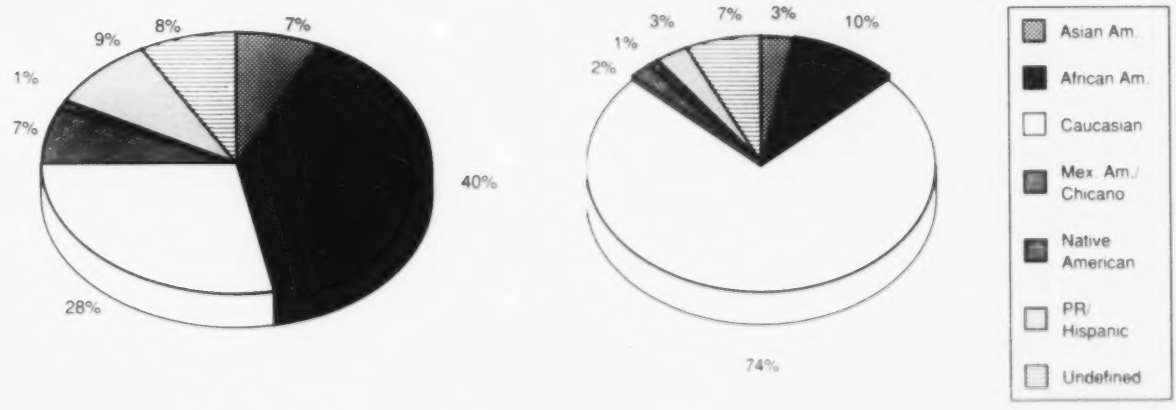
Findings

Characteristics of Test Takers

Ethnicity

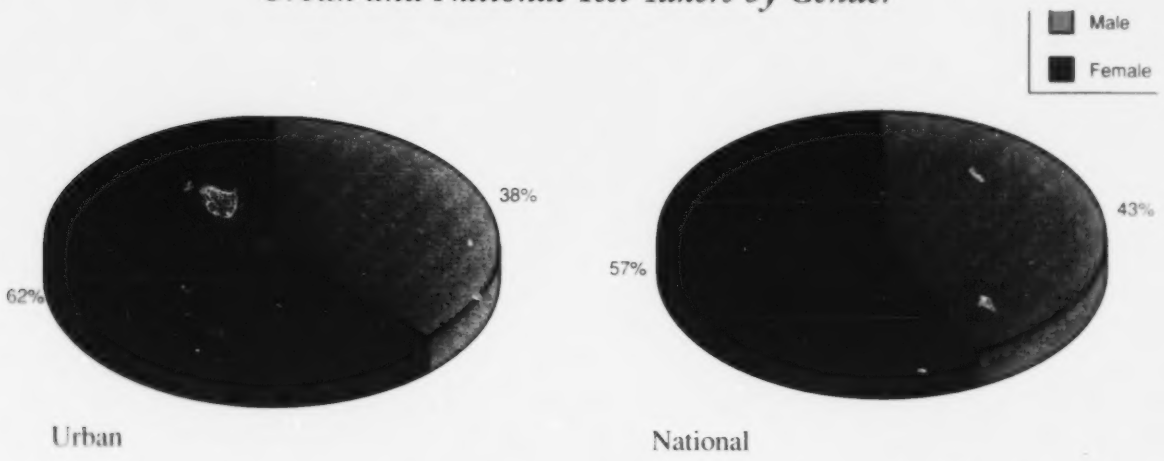
As a first step, ACT, Inc. and the Council of the Great City Schools examined the ethnic and racial composition of students taking the ACT Assessment in the Great City Schools. Urban test takers were substantially different from those nationally. Of the 942,423 students that ACT tested in 1997, 54,789 or 6% attended a public high school in one of the Great City Schools. Nearly 64% of CGCS students taking the test were students of color—40% African American, 1% Native American, 7% Mexican American/Chicano, 7% Asian American, and 9% Puerto Rican/Hispanic—compared with a national percentage of 19%. (See Figure 1.) Conversely, 74% of the students tested nationally were white, while 28% of CGCS students tested were white.

Figure 1
Urban and National Test Takers by Ethnicity



Urban National

Figure 2
Urban and National Test Takers by Gender



Urban National

This study did not analyze the impact of English language learners on district ACT Assessment scores, or the percentage of students who immigrated from other countries; nor did this study explore the impact of students with disabilities. Subsequent reports by ACT, Inc. and the Council may contain further breakdowns of the demographic characteristics of the students. Our study did analyze the performance of male and female test takers.

Gender

Great City School test takers also differed somewhat from national averages on the percentage of students who were male and female, although for both groups, larger proportions of females took the ACT Assessment than males. Nationally, some 57% of ACT test takers are female, while approximately 62% are female in the Great City Schools. (See Figure 2.)

Needs, Interests, and Goals

The Council of the Great City Schools and ACT Inc. also sought to compare the needs, interests, and goals of college-bound urban students with those of their counterparts nationally. Students enrolled in CGCS districts expressed the same strong needs for assistance in making postsecondary education decisions. However, significantly more urban students indicated that they would like help with 1) expressing their ideas in writing, 2) improving reading speed and comprehension, 3) improving math skills, 4) improving study skills, and 5) personal concerns, than students nationally. (See Figure 3.) These statistics highlight the need for quality staff in urban schools.

Urban ACT Scores

Charting the Right Course also conducted an analysis of urban school district achievement levels.

Figure 3
Urban and National Students' Needs, Interests and Goals

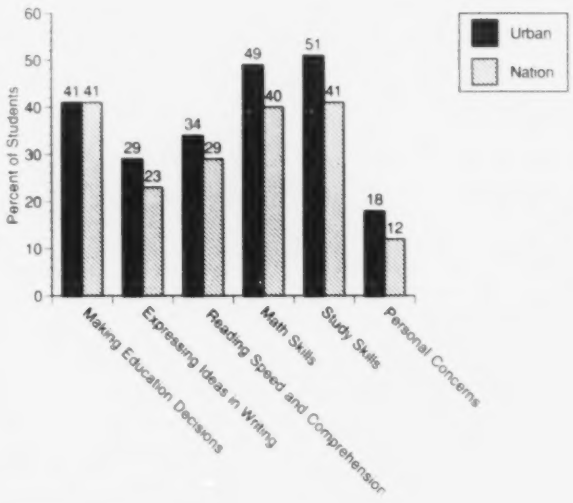


Table 1

Urban Districts' High, Low and Average ACT Scores by Content Area

	English	Math	Reading	Science Reasoning	Composite
Highest district-wide ACT averages*	21.2	22.4	22.9	22.1	22.2
Lowest district-wide ACT averages*	14.2	16.2	15.6	16.2	15.7
Great City School average	17.9	18.8	18.8	18.8	18.7
National average	20.4	20.6	21.4	21.2	21.0

*Districts with fewer than 100 students tested were not included in these calculations.

We found that average urban school district ACT Assessment scores varied substantially overall and by content area. The average ACT composite score for the Great City Schools was 18.7 in the spring 1997, compared to the national average of 21.0. The highest average urban district composite was 22.2 and the lowest was 15.7. (See Table 1.) Future reports will contain trend data.

The highest districtwide average ACT Assessment score in English for any Great City School system was 21.2, and the lowest was 14.2. The highest reading average for any of these districts was 22.9, and the lowest was 15.6. The highest districtwide math average was 22.4, and the lowest was 16.2; the highest science reasoning was 22.1, and the lowest was 16.2.

Five urban school districts, 10% of the CGCS membership, had 1997 ACT Assessment composite scores at or above the national ACT composite score of 21.0--a notable accomplishment. They were—

Clark County Public Schools, NV
Omaha Public Schools, NE
Pittsburgh Public Schools, PA
Portland Public Schools, OR
Tucson Unified School District, AZ

In addition, 26 districts had ACT composite scores at or above the CGCS composite score of 18.7. The remaining 23 districts were below the urban average.

Impact of District Size and Wealth on ACT Scores

ACT Assessment scores were next analyzed by school district size and poverty. Results of this analysis showed a marginal relationship between scores and school district size, i.e., the smaller the district, the higher the ACT Assessment scores—particularly for cities with school enrollments under 50,000 students. (See Figure 4.)

School district size, by itself, does not explain differences across the urban school districts included in this study. Size is a surrogate variable that is consistently linked to other factors, such as high crime rates, poverty, large numbers of single parent households, and high dropout rates, that tend to be more prevalent in larger districts and that affect overall district scores.

Figure 4
Urban ACT Composite Scores by District Size

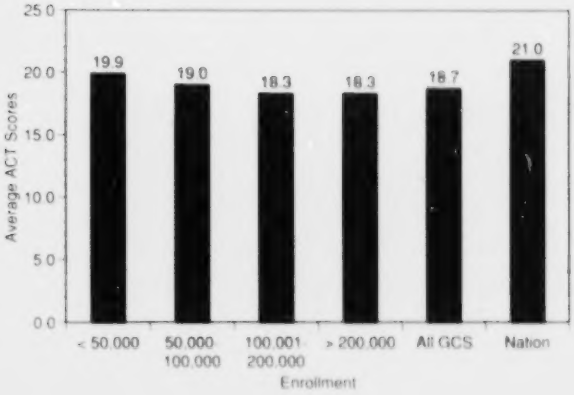
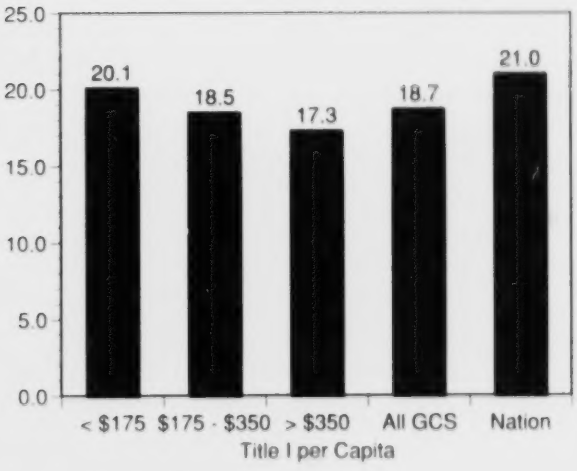


Figure 5
Urban ACT Composite Scores by Title I Per Capita Expenditure



Data were also examined by district poverty. To accomplish this, we used Title I allocation rates for urban districts, dividing each district's total Title I allocation in 1993-94 by student enrollment for that same year. Because Title I funds are distributed based on numbers of poor children, the funding levels serve as a proxy for poverty concentrations. The results are fairly dramatic. (See Figure 5.) School districts with a smaller per capita Title I allotment, i.e., districts with fewer poor children, had considerably higher ACT average composite scores (20.1) than districts with higher per capita Title I allotments (17.3).

Relationship of Course-Taking to Urban ACT Scores

Results of the Spring 1997 ACT Assessment in the Great City Schools were then analyzed by whether the test taker had taken at least the core courses. Data are shown in Table 2 by content area and ethnicity. Clearly, students in America's urban school districts score substantially higher on the ACT Assessment when they have taken at least the core courses than when they have taken a less than core program. Urban students who had taken at least the core coursework in English, for instance, scored an average of 18.9, compared with 16.4 for those who had not. In math, urban students who took the core coursework (i.e., three or more years) scored an average of 19.8 on the ACT Assessment, compared to the average of 17.2 for those who had not taken the core courses. Taking the core courses improved a student's ACT scores by an average of 2.4 points, enough to positively affect college entry in many cases.

The pattern is also consistent by ethnicity. Taking core courses in English improved average ACT Assessment composite scores for urban African American students by 1.9 points, for Native American students by 3.6 points, for Asian American students by 2.3 points, for white students by 2.4 points, for Mexican American students by 2.2, and for Puerto Rican Americans by 3.2 points.

Table 2

Urban Content Scores by Ethnicity and Academic Preparation

		African American	Native American	Asian American	Caucasian	Mexican Am./Chicano	Puerto Rican/Hispanic	GCS Average	National Average
English	Core	16.8	18.9	18.9	22.0	17.5	18.4	18.9	21.5
	< Core	14.9	15.3	16.6	19.6	15.3	15.2	16.4	18.6
Math	Core	17.3	19.1	22.5	22.2	19.3	20.0	19.8	21.8
	< Core	15.6	16.7	20.2	19.6	16.7	16.7	17.2	18.7
Reading	Core	17.5	20.0	19.6	23.2	18.4	19.5	19.8	22.5
	< Core	15.8	17.2	17.3	20.6	16.5	16.3	17.4	19.7
Science Reasoning	Core	17.5	20.1	20.2	22.4	18.7	19.4	19.7	22.1
	< Core	16.2	17.5	18.5	20.3	17.0	16.9	17.6	19.7

The differential benefit of taking the core courses remained constant across all content areas included on the ACT Assessment. For instance, the benefit for African American students amounted to 1.9 points in English, 1.7 points in math, 1.7 points in reading, and 1.3 points in science reasoning when they took the core course work.

The gaps between ACT Assessment scores of urban students who took core or more and less than core courses were also consistent across student gender. (See Table 3.) Male and female students in urban schools consistently scored substantially higher on the ACT Assessment when they had taken the core courses. Male students outpaced females, generally, in math and science reasoning, and females typically scored better in English and reading, consistent with findings of other research. But taking tougher courses helped male and female students on their ACT scores almost equally.

Comparing Urban and National Course-Taking

Charting the Right Course also looked at course-taking patterns for urban districts and the nation as a whole and examined how more rigorous course-taking in cities could affect the gap between ACT scores for urban districts and the nation. Table 4, on page 9, and Figure 6 show the comparisons by content area. Generally, students who take the core courses, both in urban schools and nationally, achieve significantly higher ACT scores in all content areas.

If all ACT test takers in urban schools were to take the core courses, the gap in scores between urban schools and the national average (unadjusted by course-taking practices) could close from 2.5 composite points in English to 1.5 points (a 40% change); from 1.8 points in math to 0.8 points (a 56% change); from 2.6 points in reading to 1.6 points (a 38% change); and from 2.4 points in science reasoning to 1.5 points (a 38% change). The gap in composite scores could close from 2.3 points to 1.3 points (a change of 43%). (See Figure 6.)

If all ACT test takers nationally were to take the core courses, however, the gap between urban students and the nation would remain the same for science reasoning (2.4) and be slightly larger (by 0.1 and 0.2 points) for all other content areas and the

Table 3
Urban Content Scores by Gender and Academic Preparation

	English		Math		Reading		Science Reasoning	
	core	< core	core	< core	core	< core	core	
GCS Males	18.6	15.9	20.6	17.6	19.6	17.0	20.2	17.9
GCS Females	19.1	16.5	19.3	16.9	19.9	17.4	19.2	17.4

composite score. (See Table 4.) In other words, the achievement gap between urban students and their fellow students nationally would remain approximately the same if everyone were to start taking rigorous coursework. Closing the gap will require urban students to improve at a faster rate than the nation.

Impact of Course Sequence on Mathematics and Science Reasoning Scores

ACT Assessment data were examined to determine differences in achievement among students taking three specific sequences of math and science courses. (See Figures 7 and 8.) Urban students with fewer than the core math courses scored an average of 15.5 on the ACT math test; while urban students taking Algebra 1, Algebra 2, and Geometry were able to boost their scores to an average of 16.2. Urban students who took Algebra 1, Algebra 2, Trigonometry, Geometry, and Calculus (not Pre-Calculus) did better still, scoring an average of 22.7 on the math portion of the ACT Assessment.

Figure 8 presents data on science reasoning scores for urban school students. Urban students taking fewer than the core courses in science scored an average of 17.0 on the science portion of the exam.

Figure 6
Urban ACT Course-Takers and National Averages

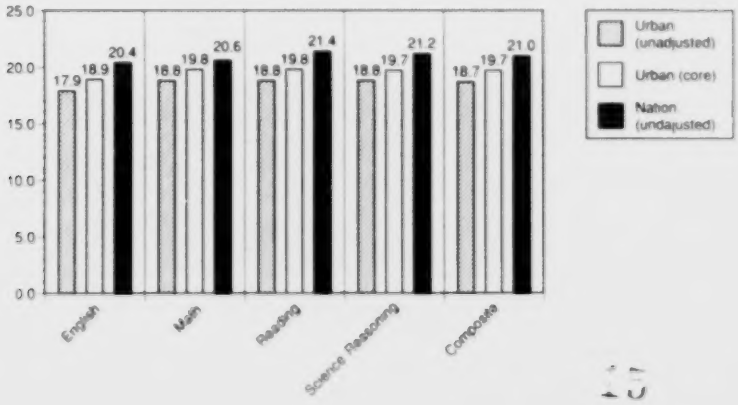


Table 4

Urban and National Averages by Content and Academic Preparation

		Urban ACT Average	National Average	Difference
English	Core	18.9	21.5	2.6
	Below core	16.4	18.6	2.2
	All	17.9	20.4	2.5
Math	Core	19.8	21.8	2.0
	Below Core	17.2	18.7	1.5
	All	18.8	20.6	1.8
Reading	Core	19.8	22.5	2.7
	Below Core	17.4	19.7	2.3
	All	18.8	21.4	2.6
Science	Core	19.7	22.1	2.4
	Below Core	17.6	19.7	2.1
	All	18.8	21.2	2.4
Composite	Core	19.7	22.1	2.4
	Below	17.3	19.3	2.0
	All	18.7	21.0	2.3

Figure 7

Urban Mathematics Test Scores by Course Sequence

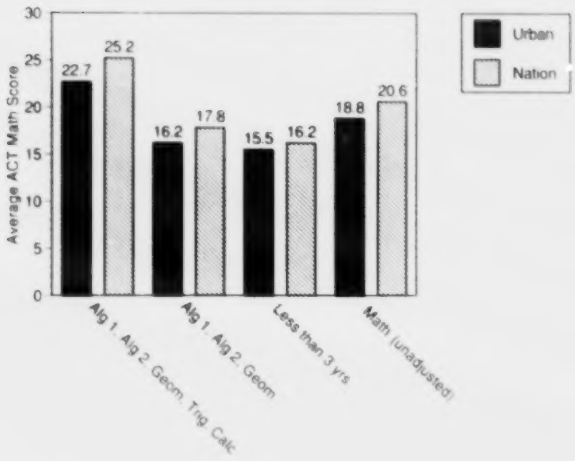
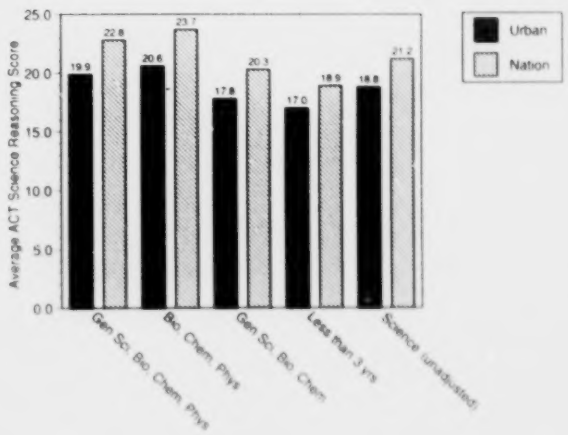


Figure 8

Urban Science Reasoning Test Scores by Course Sequence



But urban students who took General Science, Biology, and Chemistry scored an average of 17.8; and students taking those courses plus physics scored an average of 19.9. Scoring highest of all were urban school students who took no general science courses, but took Biology, Chemistry, and Physics. These urban students scored an average of 20.6 on the science portion of the ACT Assessment.

Impact of District Wealth and Course Sequence on ACT Scores

Finally, *Charting the Right Course* examined the relationship of school district wealth, student course-taking, and ACT Assessment scores. The economic status of a district was determined by the amount of Title I funding per capita it received during the 1993-94 school year.

For both the ACT Mathematics and Science Reasoning Tests, the gap between poorer urban school districts and the national average is significantly reduced by urban students' taking at least the core courses. Students from poorer urban districts who took more rigorous courses in mathematics and science also outscored the average urban student regardless of the poverty of the city. In fact, urban students who took tougher coursework outperformed students who did not take harder courses, no matter what the poverty level of the city. (See Figures 9 and 10.)

Conversely, the gap in ACT Assessment scores is substantially larger for students attending urban schools in districts that are very poor than for students in urban districts that are not quite as poor, no matter how many courses they took. Urban students, for instance, who took five full years of mathematics in high school averaged 20.1 on the ACT Assessment when they attended school in the poorest cities, 22.8 when they attended school in relatively poor cities and 24.5 when they attended school in less poor cities. The reader should keep in mind that 60% of students in the participating urban school districts were eligible for a free or reduced-price lunch subsidy.

Figure 9

Urban Mathematics Test Scores by Course Sequence and Title I Per Capita

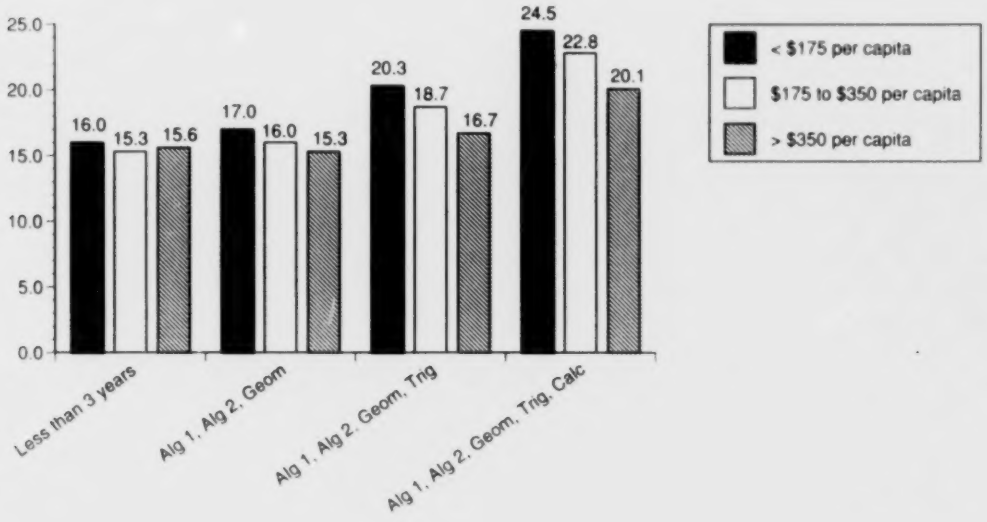
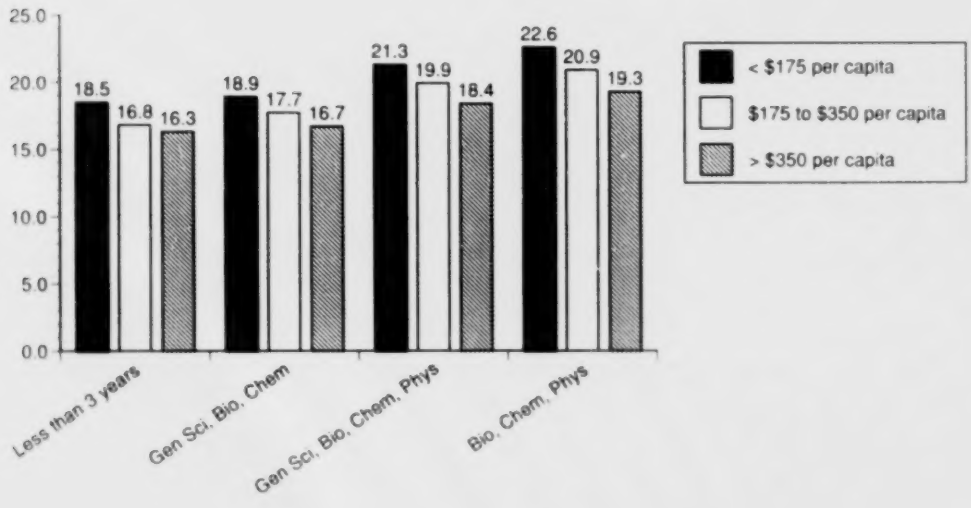


Figure 10

Urban Science Reasoning Test Scores by Course Sequence and Title I Per Capita



Discussion

Charting the Right Course shows that urban school students can substantially improve their ACT college admissions scores by taking a tougher sequence of core courses in high school. In fact, urban school students taking the core sequence of courses in reading, English, math, and science reasoning scored at or above national averages.

These findings were consistent for students whether they were male or female, students of color or not. Major improvements in ACT scores were also found for students in the poorest urban school districts who took core courses.

By and large, the analysis found that urban schools scored below national averages, although five cities scored above the national composite of 21.0. Our analysis also showed that the demographics of urban school ACT takers were substantially different from national averages in race, gender (to some degree), and levels of poverty. Urban students taking the ACT Assessment were very similar to their counterparts nationally in their need for assistance in making education decisions, although urban students expressed somewhat higher needs for personal and academic support.

In general, ACT Assessment results in urban public schools appeared to be substantially affected by both course-taking patterns and poverty. Students in urban public schools could substantially close the achievement gaps between them and their counterparts nationally, but the degree to which they could do so would depend on the concentration of poverty in the city school systems, the quality of the courses, and on the course-taking pattern of others.

There is a difference of about 2.3 ACT composite points separating the average ACT taker in the Great City Schools and the average ACT test taker nationally. That gap could close to about 1.3 ACT points if all Great City School ACT test takers were to take at least the core coursework in the specified content areas and if course-taking patterns of other students nationally remained the same. If all ACT test takers, i.e. those attending urban and non-urban schools, were to take at least the core coursework, then the gap would remain essentially the same at 2.4 ACT points.

Similar patterns are found when one looks at poverty and course-taking. One's chances of scoring at or above the national average of 20.6 in mathematics, for instance, are particularly low for students with three years or less of coursework in the subject no matter how well-off they are. One's chances of scoring above 20.6 are measurably better if one has taken five years or more of mathematics, no matter what the poverty level.

But a student from a poor school district who takes the most rigorous sequence of mathematics classes offered can just barely close the gap between his or her likely ACT math score and the national average math score for all test takers (20.1 vs. 20.6 respectively). And this student from a poor urban school is likely to be 1.7 ACT points behind that national average math score for students who took a rigorous course sequence (20.1 vs 21.8 respectively). This remaining gap may be due to the differing quality of courses bearing the same title, teacher expectations and resources.

Some urban school students do outperform national averages, including the national average for students who have taken the most rigorous coursework. Caucasian and Asian American students in urban schools, for instance, outscore students nationally in math who have taken the most rigorous coursework (22.2 and 22.5 vs. 21.8). The results suggest that students of color may not have the same opportunity to learn.

In addition, urban students taking five years of math and attending public schools in districts that are less poor outscore students nationally who have also taken the core courses in mathematics (22.8 for urban students enrolled in districts with Title I allocations between $175 and $350 per student, and 24.5 for urban students enrolled in districts with Title I allocations less than $175 per student vs. 21.8 for students nationally).

It is clear from this analysis that rigorous course-taking can substantially close achievement gaps between ACT test takers in poor urban schools and students nationally. But course-taking alone can not eliminate the gaps.

These gaps can only be eliminated if there is a concentrated effort by the states, federal government, local governments, parents, businesses and the community to play a major role in improving the quality of urban public schools.

The Great City Schools have recently reached consensus on a plan to improve urban education and reverse years of neglect by:

1. Ensuring that students attending urban schools are held to the same high standards as students from non-urban schools. Districts must work to establish and implement rigorous academic content and performance standards that will apply to all students. Urban leaders must align their district's curricula, instructional practices and assessments to these standards in core subjects.

2. Including recruitment and professional development of teachers. The shortage of teachers in cities has been estimated at 2.5 times the national average, with acute needs for mathematics and science, special education and bilingual teachers.

3. Providing schools with the programs and tools they need to increase achievement. Urban systems must work to provide all students with the instructional materials, equipment, teachers, and technology they need to meet high standards. Urban school leaders must work to provide smaller learning communities with greater capacity to improve student learning, and schedules to allow students time and flexibility to meet high standards. Districts must work to provide a foundation for learning through early childhood development efforts.

4. Strengthening school system leadership, management, and administration and enhance school decision-making. Urban systems must work to increase our capacities to lead, govern, manage, and operate large urban systems. Districts must be more responsive to the community, the schools, the parents and the students.

5. Designing assessment systems that hold everyone accountable for results. Urban leaders must design and implement accountability systems for schools and educators that tie achievement, to rewards and sanctions, as well as uniform codes of conduct for students and staff.

6. Initiating federal legislation to repair and renovate the public schools, particularly its inner city schools. Urban schools simply can not meet "world class" standards in "third world" facilities. The extent of the problem has been documented, $112 billion, by the General Accounting Office.

7. Linking urban schools and businesses, community organizations, and the higher education community. Universities and community colleges are resources in cities that are often disconnected with the needs of our children, but which could be mobilized to provide more partnering in addition to better mentoring, tutoring, and support.

8. Ensuring that urban districts have adequate resources to provide all students with opportunities that most other American children have: programs, services, books, computers, well-trained and well-paid teachers and equipment. The results over the long run will be urban student achievement matching or surpassing any in America.

All of these strategies can have a positive influence on test scores, no matter where students are enrolled. In urban schools, however, negative factors are more prevalent and their effects are often more dramatic because they are working in combination with other detrimental influences. They may explain, in part, why the achievement gaps remain, even though more and more students nationally take rigorous courses. It is clear that urban schools will have to improve faster than national averages to completely close the gaps. Otherwise, we will have a nation in which some students are permanently and purposefully relegated to a second-class future.

Recommendations and Promising Practices

These *Recommendations and Promising Practices* come from Council districts that have demonstrated success in preparing their college-bound students for postsecondary education. These CGCS districts have average ACT composite scores that are at or above the national average. These recommendations are intended to offer improvement strategies for other Great City School Districts.

1. Encourage all students to take more than the core academic preparation. Students who take at least a core college preparatory course sequence are likely to perform better on college admissions and placement examinations.

2. Encourage students to attend school daily and go to every class. Students with good attendance attain maximum benefits from their education.

3. Encourage students to take Algebra I in junior high/middle school, so they are ready for higher levels of mathematics in high school. Students who attained the highest achievement levels were those who had taken five years of mathematics. Students who do not take Algebra I in junior high/middle school should take one mathematics course for three of their high school years and two mathematics courses for one year.

4. Encourage school administrators to seek additional funding from external agencies and/or foundations to increase the number of students from underrepresented groups who enroll in and succeed in mathematics and science courses. Students of color continue to attain lower achievement levels than their counterparts. Special efforts should be made to ensure that these students have the same opportunity to learn as other students.

5. Establish a close working relationship between the high school and nearby postsecondary institutions. Students who are involved in internship programs, shadowing experiences, and other relevant experiences are better prepared to enter postsecondary education.

6. Promote strong parental involvement in their children's education. Research shows a positive correlation between parent involvement and student achievement. If structured correctly, positive adult role models can often supplement and/or substitute for parental involvement.

7. Hire and support committed, hard-working, and dedicated staff. Next to the parent, the teacher is the most important factor in the education of today's youth.

8. Offer test preparation classes before, during and/or after school. Good test preparation courses can be helpful, although nothing can substitute for a student taking the correct course sequence.

9. Ensure that each school has a plan for improving its academic performance. All students benefit when a school has a clear mission.

10. Prepare an individual education plan with academic goals for each student upon entrance to high school

11. Encourage students to participate in rigorous course offerings, such as advanced courses and/or International Baccalaureate courses in their junior and senior years in high school.

12. Encourage all students to take college entrance exams as early as possible. Dates for admission and placement exams should be well publicized in high schools. Students who take college entrance examinations early have the opportunity to seek assistance in subject areas of greatest need.

13. Seek funding to pay for students to take college entrance exams, so that all students, regardless of family income, have an equal opportunity to take the examination. Both the ACT Assessment and the SAT offer waivers for students who need financial support.

14. Ensure that the content of mathematics and science courses is rigorous and embodies high standards for all students. As more students take higher level courses, the content should remain rigorous.

15. Provide professional development opportunities for staff to ensure that they use a variety of instructional methods designed to reach all students. Not all students learn in the same manner, so staff need a wide repertoire of instructional strategies.

Appendix

Council of the Great City Schools 1996-97 Member Districts
Number of ACT Test Takers

	School District	Number of ACT Test Takers
1	Atlanta Public Schools	292
2	Baltimore City Public Schools	200
3	Birmingham Public Schools	966
4	Boston City Schools	126
5	Broward Co. School District	2738
6	Buffalo City School District	59
7	Charlotte Mecklenburg Schools	427
8	City of Chicago School District	8681
9	Clark County Public Schools	2307
10	Cleveland City School District	695
11	Columbus City School District	1096
12	Dade Co. School District	3633
13	Dallas Independent School District	703
14	Dayton City School District	329
15	Denver School District	1175
16	Detroit Public School District	3099
17	District of Columbia Public Schools	141
18	El Paso Independent School District	659
19	Fort Worth Independent School District	350
20	Fresno Unified School District	419
21	Houston Independent School District	914
22	Jefferson Co School District	3152
23	Long Beach Unified School District	328
24	Los Angeles Unified School District	3502
25	Memphis City Schools	3745
26	Milwaukee Public Schools	1359
27	Minneapolis Schools	911
28	Nashville Davidson Co. Schools	2224
29	New Orleans Public Schools	2147
30	New York School District	1037
31	Newark School District	3
32	Norfolk City Schools	38
33	Oakland Unified School District	303
34	Oklahoma City School District	527
35	Omaha City School District	1229
36	Philadelphia School District	359
37	Pittsburgh City School District	681
38	Portland School District	133
39	Providence City Schools	1
40	Richmond Public Schools	85
41	Rochester City School District	59
42	San Antonio Independent School District	654
43	San Diego City Unified School District	609
44	San Francisco Unified School District	232
45	Seattle School District	190
46	St Louis City Bd. of Education	415
47	St Paul Independent Schools	829
48	Toledo City School District	595
49	Tucson Unified School District	433
	Total	54789

About the Organizations

ACT, Inc. is an independent, not-for-profit organization dedicated to providing information to individuals of all ages to help them make successful educational and career transitions. The ACT Assessment Program is a college admissions, placement, and guidance program taken over 1.7 million times annually. It includes four tests: English, mathematics, reading, and science reasoning. ACT has a special interest in ensuring that test score data are accurately reported and used in a manner that is useful to school districts, and ACT provides similar information to states, districts, and schools that have students participating in the ACT Assessment Program.

The Council of the Great City Schools (CGCS) is the only independent organization in the nation whose sole purpose is improving urban public education. Composed of some 50 of the nation's largest city public school districts, the Council promotes urban education and advocates for urban students through legislation, research, and media relations. The organization also provides forums for school districts to share common problems and solutions, exchange information, and address new challenges.